Remarks

In the Office action dated August 28, 2001 the abstract was objected to for the unnecessary use of "the invention is." Accordingly, the abstract has been amended to remove the objected to language.

Additionally, claims 1-10 and 12-16 were rejected under 35 USC 112, first paragraph; claims 1-2, 4, 8, 11-13, 16 were rejected as being anticipated under 35 USC 102 by Mayer et al. (U.S. Patent No. 3,889,641); claims 1-2, 4, 7-8, 11-16 were rejected as being anticipated under 35 USC 102 by Clarke (U.S. Patent No. 6,199,515); claims 12-14 were rejected as being anticipated under 35 USC 102 by Barmore (U.S. Patent No, 5,092,279); and claims 12-13 were rejected as being anticipated under 35 USC 102 by Lyman et al. (U.S. Patent No. 3,807,365).

All of the remaining claims were rejected as being obvious under 35 USC 103 based upon the combination of the cited patents. Specifically, claims 3, 5-6, 10 were rejected as obvious solely in view of Mayer et al.; claim 9 was rejected as being obvious in view of Mayer et al. and Barmore; claims 3, 5-6, 10 were rejected as being obvious solely in view of Clarke; and claim 9 was rejected as being obvious in view of Clarke and Barmore.

In response to the rejections, the applicant has amended the claims to more clearly define the claims over the cited art. Support for the amendments can at least be found in the specification, drawings and claims. More specifically, support for the amendments can be found as follows: the outer cap "deflecting incoming water away from the tank 10 outlet" (Fig. 1 and spec., page 6, lines 21-22); the inner cap/cover having openings to "to help control fluid flow into the tank 10" (spec. page 6 , lines 22-24); the inlet located at a lower portion of the tank and the outlet located at an upper portion of the tank (Fig. 1 and spec., page 5, lines 11-12); the tank being annular in shape and laying on its side (Fig. 1 and spec., page 5, lines 9-11).

Claim Rejections – 35 USC 112

In the action the Office asserts the following points:

(1) "The term 'improved' in claims 1, 10 and 12, line 1 is a relative term which renders the claims vague and indefinite. "

(2) The use of "said cover" in claims 1, 10 and 11 is not clear as to which cover is being referenced.

(3) The description of outlet in claim 12 is unclear.

Addressing point (1), applicants have removed the objected to "improved" phrase in the objected to claims. Accordingly, it is believed that the Office's objection in this regard has been overcome.

Addressing point (2), applicants have amended the objected to claims to more clearly indicate the cover being referred to. Accordingly, it is believed that the Office's objection in this regard has been overcome.

Addressing point (3), applicants have amended the objected to claim to more clearly indicate that the incoming fluid is diverted "downward and away" from "said outlet." Support for this amendment can at least be found in the drawings (Figure 1) and the specification (page 6, lines 1-3). As is shown in the drawing, the outlet (14) may be located at the top portion of the tank (10). Accordingly, the operation of the baffle 20 to direct fluid flow from the bottom of the cover (32) along the flange (34) out into the tank (10) would clearly be "downward and away" from "said outlet" as claimed by applicants. Accordingly, it is believed that the Office's objection in this regard has been overcome.

Based upon the foregoing, withdrawal of all section 112 rejections is respectfully requested.

Claim Rejections - 35 USC 102

The rejection of claims 1-2, 4, 8, 11-13, 16 as being anticipated under 35 USC 102 by Mayer et al. (U.S. Patent No. 3,889,641); claims 1-2, 4, 7-8, 11-16 as being anticipated under 35

USC 102 by Clarke (U.S. Patent No. 6,199,515); claims 12-14 as being anticipated under 35 USC 102 by Barmore (U.S. Patent No, 5,092,279); and claims 12-13 as being anticipated under 35 USC 102 by Lyman et al. (U.S. Patent No. 3,807,365) is respectfully traversed.

Claims 1-2, 4, 8, 11-13, 16 under 35 USC 102(b) by Mayer et al.

Applicants' claims 1-2, 4, 11 and 16, require the baffle assembly to have an inner cover or cap having openings therein positioned over the inlet that control the flow of fluid into the tank. Despite the Office's assertion to the contrary, the lower portion 11a of the shroud 11 in Mayer et al. is not a "cover" as claimed by applicants. More importantly, though, the shroud does not have anything that could be described as "openings therein" that control the fluid flow into the tank. In fact the only opening in the shroud of the Mayer et al. reference at all appears to be the opening that the inlet pipes 19 and 20 protrude through. However, since those pipes protrude all the way through the shroud, there is no way that opening could be said to control the fluid flow into the tank as claimed by applicants.

Additionally, applicants' claims 1-2, 4, 11-13 and 16, as amended, require that the combination of the inner and outer caps define a passageway for deflecting incoming fluid **downward** and **away** from the outlet. In contrast, the Mayer et al. reference discloses a system which actually diverts water **upward** and **toward** the outlet. As stated in Mayer et al., column 4, lines 8-11, "the feed-water can exit **upwardly** through the tubes 31 and 32, discharging **upwardly** into the upward-flowing feed-water within the shroud 11" (emphasis added). Accordingly, it clearly cannot be said that the Mayer et al. reference anticipates applicants "downward and away" claim limitation when Mayer et al. explicitly teaches the exact opposite.

With respect to claims 1 and 12, and the claims depending therefrom, it is noted that all of those claims specifically require a tank that is laying on its side. In contrast, Mayer et al. explicitly teaches a vertically oriented tank. As such, Mayer et al.'s vertically oriented tank clearly does not meet the express limitations in these claims.

Accordingly, since the Mayer et al. reference does not teach every aspect of applicants rejected claims, either explicitly or impliedly, the Mayer et al. reference contain be said to anticipate those claims and the rejection of those claims on that basis must be withdrawn.

Claims 1-2, 4, 7-8, 11-16 under 35 USC 102(e) by Clarke

As stated above, applicants' claims 1-2, 4, 7-8, and 11-16 require that the combination of the inner and outer caps define a passageway for deflecting incoming fluid **downward** and away from the outlet. In contrast, the Clarke reference discloses a system which actually diverts water **upward** (whether this direction is toward or away from the outlet in Clarke is unknown as the location of that outlet is not taught). With particular reference to claims 1 and 12, those claims including the limitation that the tank have an annular sidewall, it is noted that the Clarke baffle assembly would cause incoming fluid to initially run horizontally along the sidewall of the tank and then up the sidewall of the tank. In contrast, applicants' claimed construction causes the incoming fluid to deflecting downwardly towards the inlet and away from the outlet, thereby preventing immediate movement of the fluid up the tank sidewall. As with the Mayer et al. reference, it clearly cannot be said that the Clarke reference anticipates applicants' "downward" claim limitation when the teachings of the Clarke reference are directly opposed to this limitation.

Furthermore, applicants' claims 1-2, 4, 7-8, and 15-16 all require the baffle assembly to have an inner cover or cap having openings therein positioned over the inlet to control the flow of fluid into the tank. While it is acknowledged that the Clarke reference has "a cover 4 having openings 15 therein" as stated by the Office, these openings cannot be considered analogous to applicants' claimed openings because they are not structurally the same as applicants' claimed openings, are not positioned as required by applicants' claims, and they do not perform the same function as claimed by applicants. The openings in Clarke are placed therein to "allow stagnant water below the base plate 4 once the baffle 1 is in use to circulate around the baffle and back into the water system" (Clarke, col. 2, lines 31- 36). As can be seen clearly in Fig. 1 of Clarke, these openings cannot control fluid flow into the tank (as required by applicants' claims) because

any water passing through these openings has already entered the tank. In order for the openings 15 in Clarke to function as required by applicants' claims, the openings would have to be placed over the fluid inlet. However, as can clearly be seen in Fig. 1 of Clarke, these openings are in fact positioned distinctly away from the inlet in order to fulfill the purpose for which they were put in the Clarke reference in the first place, namely to allow water recirculation around the baffle.

Additionally, while it is acknowledged that an outlet for the tank in Clarke must be inherently present, the location of that outlet in an "upper portion of the tank" as required by applicants' claims is not taught by Clarke as would be required to sustain the Office's 102 rejection.

Accordingly, since the Clarke reference does not teach every aspect of applicants' rejected claims, either explicitly or impliedly, the Clarke reference cannot be said to anticipate those claims and the rejection of those claims on that basis must be withdrawn.

Claims 12-14 under 35 USC 102(b) by Barmore

As stated above, applicants' claims 12-14 require that the outer cap have a flange for deflecting incoming fluid **downward** and away from the outlet. In contrast, the flange in the Barmore reference (see Fig. 2) appears to be shaped and positioned for deflecting incoming water horizontally and upwardly toward the outlet, not downwardly as required by applicants' claims.

Accordingly, since the Barmore reference does not teach every aspect of applicants' rejected claims, either explicitly or impliedly, the Barmore reference cannot be said to anticipate those claims and the rejection of those claims on that basis must be withdrawn.

Claims 12-13 under 35 USC 102(b) by Lyman et al.

As stated above, applicants' claims 12-13 require that the outer cap have a flange for diverting incoming fluid downward and away from the outlet. The Office asserts that applicants' water diverting "flange" is taught in Lyman et al. by reference numbers 26 and 27. However, the Lyman et al. reference does not define these reference numbers as flanges. Instead, Lyman et al. defines these structures as the top and bottom portions, respectively, of the pre-heater enclosure. Lyman et al., col. 2, lines 29-32. Furthermore, a review of drawing figures 1-3 of Lyman et al. confirms that reference numbers 26 and 27 are in fact walls, not flanges, that completely enclose the pre-heater. In this regard, applicants are unaware of any definition for a flange (defined in Webster's Ninth New Collegiate dictionary as a "rib" or a "rim") which would make the flange claimed by applicants equivalent or analogous to the walls taught in the Lyman et al. reference.

Accordingly, since the Lyman et al. reference does not teach every aspect of applicants rejected claims, either explicitly or impliedly, the Lyman et al. reference cannot be said to anticipate those claims and the rejection of those claims on that basis must be withdrawn.

Claim Rejections - 35 USC 103

The rejection of claims 3, 5-6, 10 as being obvious solely in view of Mayer et al.; claim 9 as being obvious in view of Mayer et al. and Barmore; claims 3, 5-6, 10 as being obvious solely in view of Clarke; and claim 9 as being obvious in view of Clarke and Barmore is respectfully traversed.

Claims 3, 5-6, 10 under 35 USC 103 in view of Mayer et al.

Initially, the Office is requested to review applicants' arguments above with respect to the deficiencies of the Mayer et al. reference in general. It is noted that those arguments all are relevant with respect to the rejection of claim 10. Furthermore, since claims 3, 5, and 6 all depend from claim 1, those arguments are relevant with respect to those claims as well. Additionally, with respect to the rejection of claims 3 and 10, applicants note that it could not have been obvious to one of ordinary skill to select applicants' claimed trapezoidal shaped

openings when the Mayer et al. reference doesn't teach any openings, or the utility or desirability thereof, at all!

Accordingly, since the teachings of the Mayer et al. reference do not teach or suggest every element of applicants' claims to one of ordinary skill in the art, applicants claims cannot be said to be obvious in view of that reference and the rejection of those claims on that basis must be withdrawn.

Claim 9 under 35 USC 103 in view of Mayer et al. and Barmore

Initially, the Office is requested to review applicants arguments above with respect to the deficiencies of the Mayer et al. and Barmore references in general. Those arguments are applicable to claim 9 to the extent that claim 9 depends from claim 1. With respect to Barmore's supposed teaching of a bracket 46, it is noted that the Barmore reference refers to that element as a "hook," not a bracket. That hook 46 is used to frictionally engage another hook 82, thereby retaining the baffle in the heater. Barmore, col. 5, lines 22-37. The combination of those hooks do not support the baffle. Instead, the baffle sits on and is supported by the floor of the heater. The hooks operate to retain, not support, the baffle in the heater. In contrast, applicants disclose and claim a bracket for supporting the outer cap, this support generally considered by those of ordinary skill in the art to be the function of a bracket. However, since the hooks of Barmore clearly do not fulfill this "support" function, they cannot be said to read on applicants' claimed bracket. And since the Office has provided no teaching of a bracket at all, there cannot be any motivation or suggestion to add this missing bracket to the insufficient teachings of Mayer et al. to arrive at applicants claimed invention.

Accordingly, since the combined teachings of the Mayer et al. reference and the Barmore reference do not teach or suggest every element of applicants' claim 9 to one of ordinary skill in the art, applicants' claim 9 cannot be said to be obvious in view of those references and the rejection of that claim on that basis must be withdrawn.

Claims 3, 5-6, 10 under 35 USC 103 in view of Clarke

Initially, the Office is requested to review applicants' arguments above with respect to the deficiencies of the Clarke reference in general. It is noted that those arguments all are relevant with respect to the rejection of claim 10. Furthermore, since claims 3, 5, and 6 all depend from claim 1, those arguments are relevant with respect to those claims as well. Additionally, with respect to the rejection of claims 3 and 10, applicants note that it could not have been obvious to one of ordinary skill to select applicants' claimed trapezoidal shaped openings when the Clarke reference doesn't teach openings that are analogous to those claimed by applicants, much less the utility or desirability thereof, at all!

Accordingly, since the teachings of the Clarke reference do not teach or suggest every element of applicants' claims to one of ordinary skill in the art, applicants' claims cannot be said to be obvious in view of that reference and the rejection of those claims on that basis must be withdrawn.

Claim 9 under 35 USC 103 in view of Clarke and Barmore

Initially, the Office is requested to review applicants' arguments above with respect to the deficiencies of the Clarke and Barmore references in general. Those arguments are applicable to claim 9 to the extent that claim 9 depends from claim 1. With respect to Barmore's supposed teaching of a bracket 46, it is noted that the Barmore reference refers to that element as a "hook," not a bracket. That hook 46 is used to frictionally engage another hook 82, thereby retaining the baffle in the heater. The combination of those hooks do not support the baffle. Instead, the baffle sits on and is supported by the floor of the heater. The hooks operate to retain, not support, the baffle in the heater. In contrast, applicants disclose and claim a bracket for supporting the outer cap, this support generally considered by those of ordinary skill in the art to be the primary function of a bracket. However, since the hooks of Barmore clearly do not fulfill this "support" function, they cannot be said to read on applicants' claimed bracket. And since the Office has provided no teaching of a bracket at all, there cannot be any motivation or

suggestion to add this missing bracket to the insufficient teachings of Clarke to arrive at applicants' claimed invention.

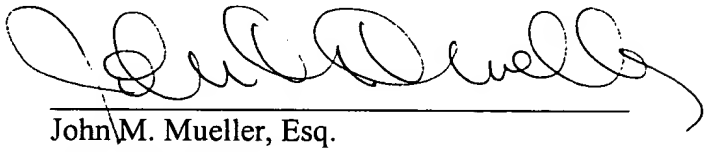
Accordingly, since the combined teachings of the Clarke reference and the Barmore reference do not teach or suggest every element of applicants' claim 9 to one of ordinary skill in the art, applicants' claim 9 cannot be said to be obvious in view of those references and the rejection of that claim on that basis must be withdrawn.

Conclusion

For the foregoing reasons, the applicants respectfully submit that all claims are allowable and withdrawal of the rejections of record and issuance of a Notice of Allowance is respectfully requested.

If the Examiner wishes to discuss any aspect of this response, please contact the undersigned at the telephone number indicated below.

Respectfully submitted,



John M. Mueller, Esq.
Reg. No. 44,248

THOMPSON HINE LLP
2000 Courthouse Plaza, N.E.
10 West Second Street
Dayton, Ohio 45402-1758
(937) 443-6832

MARKED-UP VERSION OF ABSTRACT AND CLAIMS SHOWING AMENDMENTS

IN THE ABSTRACT:

Please amend the abstract to read as follows:

Abstract

[The invention is a] A baffle for slowing the incoming water flow into a booster heating tank so that the turbulence in the water tank is minimized. The baffle consists of an inner cap and outer cap which are positioned over the inlet to a water heating tank. The outer cap is spaced apart from the inner cap such that the incoming water flows through openings in the inner cap and is directed to the underside of the outer cap. The water, having been sufficiently slowed by the contact with the underside of the outer cap, then smoothly flows downward along the outer cap flange and into the main plenum of the tank.

IN THE CLAIMS:

Please amend claims 1, 9, 10, 11, and 12 as follows.

1. (Once Amended) [An improved] A fluid heating tank comprising:

a fluid heating tank laying on its side and having an inlet located in an annular sidewall of said tank at a lower portion of said tank and an outlet located at an upper portion of said tank higher than said inlet; and

a baffle assembly positioned within said tank over said inlet, said baffle assembly comprising an inner cap positioned over said inlet including [a] an inner cover having openings therein to control fluid flow into said tank, an outer cap positioned over said inner cap including [a] an outer cover and having a flange depending from said outer cover, said inner cap and said outer cap defining a passage for deflecting fluid entering said tank downward and away from said outlet.

9. (Once Amended) The fluid heating tank of claim 4 wherein said outer cap is supported by brackets depending from [a wall] said sidewall of said tank.

10. (Once Amended) [An improved] A water heating booster for use with a commercial warewasher comprising:

a water heating tank having an inlet located at a lower portion of said tank and an outlet located at an upper portion of said tank above said inlet; and

a baffle assembly positioned within said tank over said inlet, said baffle assembly comprising a square-shaped inner cap positioned over said inlet including [a] an inner cover having trapezoidal openings therein to control fluid flow into said tank, a square-shaped outer cap positioned over and spaced apart from said inner cap by a support post including [a] an outer cover and having a flange depending from said outer cover to at least partially surround said inner cap, said inner cap and said outer cap defining a passage for diverting incoming water downward and away from said outlet.

11. (Once Amended) A method for improving the heating efficiency of a water heating booster for use with a commercial warewasher comprising the steps of:

selecting a fluid heating tank having an inlet located at a lower portion of said tank and an outlet located at an upper portion of said tank above said inlet;

positioning a baffle assembly over said inlet within said tank, said baffle assembly comprising an inner cap positioned over said inlet including [a] an inner cover having openings therein to control fluid flow into said tank, an outer cap positioned over said inner cap including [a] an outer cover and having a flange depending from said outer cover, said inner cap and said outer cap defining a passage for diverting incoming water downward and away from said outlet so that water entering said tank is slowed thereby minimizing turbulence in said tank and improving the heating efficiency therein.

12. (Once Amended) [An improved] A fluid heating tank comprising:

a fluid heating tank laying on its side having an inlet located in an annular sidewall of said tank at a lower portion of said tank and an outlet located at an upper portion of said tank above said inlet; and

a baffle assembly, said baffle assembly comprising an outer cap positioned over said inlet [and generally perpendicular thereto] said outer cap including a water diverting flange depending downwardly therefrom for directing fluid flowing into the tank downward towards said annular sidewall and away from said tank outlet.